Patent Claims

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- 1. Process for the production of carbon black pellets, in which carbon blacks are compacted in the presence of auxiliary substances and comminuted to yield pellets, wherein the pellets have an average particle size of 0.3 to 2 mm, preferably of 0.5 to 1.0 mm, characterised in that the quotient of density and bulk density is between 3.0 and 10, preferably between 3.5 and 8.
- 2. Process according to claim 1, characterised in that compaction is performed twice or more.
 - 3. Process according to claims 1/and 2, characterised in that one or more binders and/or dispersants are used as auxiliary substances in a total quantity of 0.1 to 25 wt.%, preferably of 1 to 20 wt.%, in particular of 3 to 15 wt.%.
 - 4. Process according to claims 1 to 3, characterised in that a liquid binder is used from the group comprising polyols, polyethers, polyesters, oils, water and aqueous solutions of polymeric salts or molasses.
- 5. Process according to claims 1 to 3, characterised in that a dispersant is used from the group comprising lignin sulfonates and naphthalene/formaldehyde condensation products.
- 6. Process according to claims 1 to 5, characterised in that compressive forces of between 1 and 100 kN/cm, preferably of between 5 and 50 kN/cm, in particular of between 10 and 30 kN/cm are used.
 - 7. Process according to claims 1 to 6, characterised in that compaction units are used in the form of screws, rollers, die presses or extruders.

- 8. Process according to claims 1 to 7, characterised in that compaction is performed in two or more compaction stages at differing compressive forces.
- 9. Process according to claim 8, characterised in that there are two compaction5 stages.
 - 10. Process according to claims 1 to 9, characterised in that screening is performed as a subsequent stage.
- 10 11. Process according to claims 1 to 10, characterised in that the separated screen fractions are pelletised.
- Process according to claims 1 to 11 characterised in that the resultant pellets are coated with a thin layer of a material from the group comprising waxes, polyethers, polyelefins and polyvinyl alcohols.
 - 13. Process according to claims 1 to 12, characterised in that preservatives and/or fragrances are additionally added.
- 20 14. Compacted carbon black pellets having a relative colour intensity, relative to the powder on which they are based, of greater than 100%.
- 15. Carbon black pellets according to claim 14, characterised in that that they have an average particle size of 0.3 to 2 mm, preferably of 0.5 to 1.0 mm, and that the quotient of density and bulk density is between 3.0 and 10, preferably between 3.5 and 8.
 - 16. Carbon black pellets according to claims 14 and 15, characterised in that they are obtained by compaction performed twice or more.

17. Carbon black pellets according to claims 14 to 16, characterised in that they contain one or more binders and/or dispersants as auxiliary substances in a total quantity of 0.1 to 25 wt.%, preferably of 1 to 20 wt.%, in particular of 3 to 15 wt.%.

Carbon black pellets according to claim 17, characterised in that the binder(s) comprise(s) a liquid substance from the group comprising polyols, polyethers, polyesters, oils, water and aqueous solutions of polymeric salts or molasses.

19. Carbon black pellets according to claim 17, characterised in that the dispersant comprises a substance from the group comprising lignin sulfonates and naphthalene/formaldehyde condensation products.

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Carbon black pellets

Abstract

This invention relates to carbon black pellets obtained by compaction of carbon black powder in the presence of auxiliary substances, which pellets, despite the compaction, surprisingly exhibit greater colour intensity than the powders on which they are based.